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APPROACHES TO CONTRACTUAL AGREEMENTS AIMED AT ACCESS TO TECHNOLOGY AND TO ITS IMPROVEMENTS IN THE PETROCHEMICAL INDUSTRY WITH ILLUSTRATIVE EXAMPLES*

Prepared by
the UNIDO secretariat

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PREFACE

1. Two Consultations on the Petrochemical Industry have taken place since the Industrial Development Board at its twelfth session in 1978 authorized UNIDO to convene a Consultation Meeting on the Petrochemical Industry. The First Consultation was held in 1979 in Mexico City and the Second Consultation took place in Istanbul, Turkey, in 1981.

2. The First Consultation considered the future world production of petrochemicals to the year 2000 and the possible increase of the share of developing countries in production which could be achieved through co-operation involving governments and the industry in developed and developing countries in two main areas: Marketing of petrochemicals and transfer of technology for petrochemical production.

3. The Second Consultation considered that the development of the petrochemical industry in developing countries should not be limited to marketing arrangements but should include long-term arrangements in the petrochemical industry specifying the following:

- Marketing and trade;
- Financing;
- Access to technology and to its improvement;
- International co-operation between countries and companies concerning their policies on the replacement or expansion of capacities for selected petrochemical products;
- Training;
- Secure long-term supply of raw materials and feedstocks;
- Barter arrangements for the supply of equipment and production.

4. These subjects are increasingly formulated in separate contractual agreements between developed and developing countries' companies. Access to technology and its improvements is presented in this paper together with illustrative contractual texts.

I. Introduction

5. The economic conditions for petrochemical production in developing countries are generally favourable, particularly for countries with larger markets and/or with access to raw materials (gas, oil, etc.). Some developing countries, e.g. Brazil, India, Mexico and South Korea, have already gained experience in implementing and operating petrochemical plants; others will have to rely on outside technical and marketing help.

6. The manufacture of petrochemicals affords a promissing area of co-operation between developed and developing countries. This co-operation can be achieved through technical collaboration alone or through technical and financial collaboration (joint ventures) with continuing assistance in market development and technological improvements. As far as access to technology and to its improvement is concerned, this may be realized through various kinds of agreements such as turn-key contract, cost reimbursable contract, or license and know-how agreement (Model forms of these arrangements have already been prepared by UNIDO*/). There is, however, a growing demand for a simple and separate agreement covering a well defined activity, e.g. technical collaboration, technical assistance, technical information etc. It should be indicated that the benefit of such agreement to unexperienced companies in developing countries which do not have substantial engineering and equipment manufacturing capabilities is rather questionable, since the licensor's liabilities are in this case limited, and therefore the risk of the licensee is far greater.

7; For illustrative purpose and to give an outline how such agreements could be approached, example texts have been prepared and are presented below. These illustrative texts do not in any way replace the parties' judgement or contractual skills. Rather they provide a basis from which a fair balance between mutual obligations, liabilities and financial compensations could be achieved according to the particular requirements of most developing countries.

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*/ UNIDO/PC.26/Rev.1
UNIDO/PC.50/Rev.1

II. Scope of Access to Technology and to its Improvements.

1. Problems related to technology acquisition in the developing countries

8. The petrochemical industry involves the application of complex and complicated technologies, when selecting them, developing countries should look for tested and for easily operated ones, particularly in view of the relative inexperience of operating staff. In particular they should avoid untested technical innovations and techniques which depend on extremely experienced, highly qualified personnel.

9. The careful selection of proper processes, equipments and catalysts could have immense bearing on investment cost of this highly capital-intensive industry. A good example to demonstrate how enormous finances can be saved only by using proper catalyst is the new Montedison process for polymerization of ethylene - propylene copolymer*/. The investment costs for a 45,000 metric ton/year plant using the new process based on special high-yield titanium catalyst are 42% of the cost of the older solution process plant. However, one has always to bear in mind that the technology to be selected must correspond to the experience and qualification of available manpower.

10. In the final analysis the selected technology will be a compromise between factors corresponding to qualification of personnel, production of good quality competitive products and the latest and most sophisticated requirements. Furthermore, the selection of the technology must be guided by the available source of feedstocks and be corresponding to the demands of already established and operating downstream industries and to others anticipated in the future.

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*/ Chemical Marketing Reporter, July 8, 1985

11. Before the decision on the choice of the technology is done, developing countries must pay attention to relatively newer but very important and serious aspect - the protection of environment. Because of the nature of raw materials, processes and products, petrochemical plants have potential environmental and health hazards. Damage may occur through continuous effluent discharges, leakages or accidents. The minimization or prevention of these damages will depend upon the chosen technology, reliable quality equipment, and proper preventive measures to be taken at the planning/design stages.

12. The developing countries, planning to set up a petrochemical plant, which already have refining or chemical industry, will find it in their interest to select the same type of instrumentation as in these established industries, since trained personnel will be available and the stock of spare parts which has to be kept is minimized.

13. Developing countries having a large labour force but a shortage of specialists, should avoid the adoption of highly automated techniques requiring highly specialized maintenance personnel.

14. The technical complexity, high investment costs, the experience and qualification of personnel, feedstocks, environmental protection, downstream industries, available labour force are some of the major factors characterizing problems connected with technology. Naturally there are many other aspects particularly those related to actual processes, equipment or catalysts. The purpose of this paper is not to deal with all those problems or to list or discuss recent developments.

2. Possibilities of solving technology problems

15. The routes by which companies in developing countries could solve problems related to their petrochemical technology could be the following:

a) Own efforts

b) Bought services

c) Agreements

16. The selection of any one of these routes will depend on the complexity of technology transferred and the experience of the licensee. The two extremes in the development of technological capabilities would either be to import all ready-made technological innovations from other countries or alternatively to rely only on nationally developed scientific ideas, discoveries and technological innovations. Although a number of developing countries were able to build a considerably versified scientific and technical capability it would be unrealistic to assume that they could sustain the petrochemical industry entirely on their own. The correct approach to development has to be based on a combination of national efforts and the utilization of the achievements of industrialized countries, and in some instances, other developing countries.

17. To assure the ability to solve technological problems by own efforts the developing countries must take the initiative to create the necessary infra-structure for promoting education and training in the natural sciences and in petrochemical technology. In addition interaction with the outside world could be nurtured through the organization and attendance of seminars, symposia, and conferences specific to the petrochemical industry. They could also arrange for the training of their personnel with companies and institutions to expose them to the operations of the petrochemical industry and to the ways in which research is undertaken and pursued by others. The intensity of their efforts in this direction will depend on the level of investment alloted to this purpose on national, sectoral and company levels.

18. It should be realized here that future development of developing countries will depend on the emphasis they give to education on all levels and on the promotion of research institutions. Without the realization of this, developing countries, despite the increase in technology transfer, would remain more and more dependent on assistance from the industrialized countries. Technological growth to be self-generating and self-propagating, has to be endogenous and must be rooted in the basic intellectual atmosphere and technological skill and industrial organization of a country.

3. Technology agreements

19. Access to technology may be realized via various forms of agreements, complex or simple; depending on the complexity of transferred technology and preferences or experiences of developing countries. Some of the well-known agreements are indicated below:

(a) Licensing agreement;

(b) Technical collaboration agreement;

(c) Technical information agreement;

(d) Technical services and assistance agreement;

(e) R&D agreement.

20. The licensing agreement constitue one of the most important item of co-operation between developing and developed countries in the field of industry. The advantages of such agreement lay in enabling the licensee to select the most suitable process and the most suitable contractor independently. The disadvantage of this agreement stems from the independent responsibility of the licensor and the contractor towards the licensee. Therefore, the dispensing of the licensee's deep involvement and coordinating responsibilities will depend entirely on the experience, knowledge and skill of his own personnel*/). Illustrative texts of collaboration and technical information agreement are given in detail in the following chapter dealing with contractual arrangements for the access to technology and to its improvement.

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*/ UNIDO/PC.50/Rev. 1, Model forms of Agreement for the Licensing of Patents and Know-how for the Petrochemical Industry.

4. Technical services and assistance agreement

21. A typical technical services and assistance agreement usually covers such aspects as:

(a) Services and assistance from the licensor during plant erection period;

(b) Services and assistance from the licensor in respect of plant start-up;

(c) Transmission of services and assistance;

(d) Payment for services and assistance;

(e) Warranty;

(f) Taxes;

(g) Applicable law and arbitration;

(h) Force-majeure.

22. Services and assistance during plant erection may include following commitments of the licensor:

i) The preparing of detailed mechanical engineering and instrumentation design, including drawings; the preparation of sufficient information and data to obtain tenders for equipment to be purchased for the plant and the actual purchasing of all equipment; the carrying out of the overall supervision of the construction work and the project co-ordination and management, including planning, control of programmes and costs.

ii) In respect to plant start-up the licensor may agree to provide the technical services and assistance which the licensee may reasonably require, prior to and during start-up of the plant. Such services and assistance consist of training licensee's staff in the licensor plant and furnishing of the licensor's qualified engineers for the final testing, adjustments and start-up of the plant.

iii) Technical services and assistance may be transmitted orally, in writing or by practical demonstration, and should be sufficient in scope to enable competent engineering and manufacturing personnel to understand, apply and evaluate the subject matter.

5. Technology improvements and R&D agreements

23. The amount of knowledge is continuously growing in all areas of human activities, naturally, not excluding those concerned with development of the new materials, processes or technologies. The acquired knowledge results in revolutionary changes in technology and industry itself and these have again a very profound influence on the acceleration of the moral ageing of equipments, and technologies. Exaggerating this phenomenon it is possible to state that each latest technology put into operation is already obsolete when it is judged from the view of research laboratories or even pilot plants' production.

24. The times when an industry could manage to be profitable with technologies ten and more years old are gone. The intervals for necessary innovations are becoming shorter, and improvements must be introduced on a continuous basis. Realizing this it appears to be vitally important for the developing countries, when entering any agreement concerned with technology acquisition, to make such provisions which would assure the continuous access to improvements. Otherwise the recepient would, sooner or later, end up with an obsolete plant.

25. Access to technology improvements is extremely important, in particular to those developing countries which do not possess well established own research capacities. However, own-technology improvements presupposes investments in research and development, which are rather high and the sources might not be immediately available. On the other hand, technology suppliers are often in a position to carry out extensive research and development activities and may even offer a variety of research and development services to technology recipient. This could be accomplished by separate R&D agreement which would be a good starting point for future endogenous technology improvement achievements in developing countries.

26. For the time-being the practice of R&D agreements is not widely spread. It has to be, however, realized that their occurance will be and should be increasing, since basic and applied research in developing countries is presently far from being able to support industrialization and exploitation of

country's natural resources. It would be necessary to substitute this shortcoming by R&D agreements. The importance of such agreements will increase even with the growth and spread of research institutions, which would be able to undertake joint activities with similar entities in the developed countries. Today even the most industrialized countries with huge human and natural resources can not fully rely on their own research, or afford to undertake basic and applied research in the whole spectrum of human activities.

27. The increase of specialization and collaboration in the field of research witnessed today will be even more profound in the coming years. The activities in R&D co-operation between developing countries and developed countries and developing countries themselves can be foreseen and that underlines the increasing significance of R&D agreements.

6. Transfer of technology

28. Transfer of technology is not confined to the sale of plants and production licenses but covers various other aspects, the most important of which is staff training. The presence of qualified and trained personnel is indispensable for the proper operation of a petrochemical industry and such personnel can be trained only through the assistance of companies which have the necessary experience: engineering companies, producers and specialized staff training organizations.

29. The process of acquiring technology involves a sequence of interlinked activities, such as the identification of technological needs, the obtaining of information on alternative sources of technology, the evaluation and selection of the most appropriate technology, the negotiation of the best terms and conditions, the absorption and adaptation of the imported technology and their maximum utilization.

30. A first step in the process is to find the sources of the petrochemical tehnology. Trade magazines and newspapers often carry advertisements offering or requesting a given technology. Trade associations often provide aid and advice to smaller enterprises desirous of finding suitable partners. Certain

governments maintain trade promotion offices or have established units, such as national research development organizations, which act as focal point for technology offers and demands.

31. Industrial fairs are recognized as one of the most effective means of technology transfer. There, at the same location, similar and competing products and processes as well as latest development trends in technology can be examined and compared by interested customers and potential users. Moreover, the fairs offer excellent opportunities to establish contacts with suppliers of technology and equipment as well as with potential partners for joint ventures.

32. The negotiation of the terms and conditions of the technology transfer transaction is an important and responsible undertaking. Where such transactions are complex, it may be legally better practice to incorporate each of the various elements in a different license or agreement. Thus, separate agreements may be used in respect of each matter such as the technical collaboration, technical information and technical services and assistance. This is especially important when substantial know-how is required. Further, it is necessary to realize that the utilization of available technological services must start in the planning stage of the project and should be included in the contractual arrangements.

33. For a further general commentary and a detailed information on contracting and licensing consult the following documents:

- Guidelines for Contracting for Industrial Projects in Developing Countries, UNIDO, Vienna, ID/149.
- Licensing Guide for Developing Countries, WIPO, Geneva, WIPO Publication No.620(E).

III. Contractual Arrangements for Access to Technology and to its Improvement

34. In this chapter two illustrative examples of agreements related to access to technology and to its improvement are presented. The first deals basically with access to technological hard-ware whereas the second deals primarily with soft-ware. The more important and perhaps controversial items in the text are provided with explanatory notes and in certain cases with alternative texts.

35. It should be made clear at this point that these texts do not provide a model form of agreement but only some advisable formulations that are being widely considered in business practices. As it is always been indicated there are no two identical contracts on any one score for each contract is dictated by the conditions governing its negotiation and the balance of power between the negotiating partners. Since there are always changings so will the text of the final contract.

1. Illustrative Text of Technical Collaboration Agreement

This Agreement made _____ _____ (Day, month and year)

between

The Licensor _____ (Legal name of Licensor)
having registered office _____ (place)
(hereinafter called "Licensor") of the one part

and

The Licensee _____ (Legal name of Licensee)
having registered office _____ (place)
(hereinafter called "Licensee") of the other part.

Article I

1.1 License Grant & Products covered

The Licensor grants an exclusive license to the Licensee to manufacture and market the following products in _____ (country/countries)

(List of products)

The license does include the right for the Licensee to use the trade names under which the Licensor sells the licensed products.

Article II

Definitions

The purpose of this Article is to define the key words used in the Agreement so that their meaning is clear and unambiguous. The key words or expressions to be defined are normally those which are repeatedly used in the document. Because of likely language barriers and the differences in the legal systems which prevail in the various countries, definitions assume a particular importance in documents embodying an industrial property license or technology transfer agreement of an international character.

2.1 Licensed Products

The term "licensed products" means the products identified in Article 1.1 above.

2.2 Technical Assistance

"Technical Assistance" means assistance furnished by the Licensor which will enable the Licensee in acquiring sufficient know-how and technical information about the licensed products to perform adequately its obligation under this Agreement. This includes assistance in connection with technical service to the customers.

2.3 Technical Information

"Technical Information" means manufacturing information, formulae, processes, knowledge, know-how, application and sales information pertaining to the licensed products.

2.4 Proprietary Information

"Proprietary Information" shall mean all technical information and know-how disclosed by the Licensor to the Licensee in written documents marked "confidential". The term shall also include all disclosures made by the Licensor to the Licensee, provided such disclosures are promptly set forth in writing by the Licensor and marked "confidential". A copy of any such writing shall promptly be forwarded by the Licensor to the Licensee.

2.5 Net Sales

"Net Sales" shall mean the total billing price for all licensed products sold and delivered, less returns on goods and less only trade discounts actually allowed, transportation and insurance costs.

2.6 License Year

"License Year" shall mean each period of 12 months beginning with January 1, May 1, September 1, whichever of these dates comes first, following the date of execution of this Agreement.

2.7 License Year Period

"License Year Period" shall mean each successive four month period during the license year, as follows:

January 1 to April 30;
May 1 to August 31;
September 1 to December 31.

Article III

Technical Assistance

A variety of technical assistance may be involved in a given technology transaction. Professional expertise - whether in the form of engineers, specialists, experts or consultants - may be utilized to establish training programmes or to provide technological services. The professional expertise of the technology supplier is frequently used to train the staff of the licensee so that such staff may replace specialists of the licensor. The training plans and programmes will normally specify the type and quality of instructions to be given, the category, qualifications and number of trainees, the time, period and place of the training.

Technical assistance may further include obligations of the licensor to advise on the factory layout, on quality control of the product, on selection methods for personnel to be employed; to carry out tests of the product and performance test of the plant; to supervise the start-up and putting into operation of the plant.

3.1 Form of Technical Assistance

The Licensor shall in due time furnish technical assistance and such other information as might be deemed necessary for the manufacture of the licensed products such technical assistance shall be given to the Licensee whenever relevant in writing. Technical assistance shall include:

1. Furnishing personnel to assist the Licensee in the manufacture of licensed products;

2. Training of local technical personnel of the Licensee in the Licensor's plants;

3. Testing and analysis by the Licensor of samples of licensed products manufactured by the Licensee.

4. Advice and if required assistance on technical service to customer during the term of this Agreement.

3.2 Training of the Licensee's Personnel

Salary, travel and subsistance expenses for personnel of the Licensee during training in the Licensor's plant will be at the expense of the Licensee.

Article IV

4.1 Proprietary Information and Service

Throughout the duration of this Agreement and for ..... years from the date of its termination, the Licensee shall maintain strict secrecy with respect to all proprietary information received by the Licensor and shall develop procedures to prevent disclosure of the proprietary information by persons employed by the Licensee.

Article V

Various approaches can be taken by parties to provide information about and to define their respective rights in the improvements which either may have made or acquired. The licensor or the licensee may decide that the mutual exchange of information on improvements is in their best interests, and that each shall be free to exploit on a non-remunerative basis the technological improvement of the other. This approach is likely to be adopted when it is expected that the technological advances will be forthcoming from each party in equivalent degree, or the parties have approximately the same research and development capacity.

5.1 Right of the Licensor to use the Licensee's improvements

Any improvement of the licensed products (made after date of Agreement) developed or acquired by the Licensee during the terms of Agreement shall be given to the Licensor. The Licensor shall have the right to use without any compensation to the Licensee the information about such improvements.

5.2 Right of the Licensor to the New Licensee's Products

If the Licensee should develop a new product within the range of products as specified in Article 1.1, the Licensee shall give the Licensor the first right of refusal to make, use or sell this product outside the territories designated in Article 1.1; Royalties payable by the Licensor to the Licensee in the event that the Licensor exercises this right shall be the same as specified in Article 6.1

5.3 Right of the Licensee to use the Licensor's Improvements

Any improvement or initial "know-how" on licensed products (made after date of Agreement) by the Licensor shall be given to the Licensee without any compensation to the Licensor. Rights of such improvements will be for same territories as granted for initial know-how.

5.4 Right of the Licensee to Produce New Products developed by the Licensor

If the Licensor should develop any new products within the range of products as specified in Article 1.1, the Licensor shall offer these to the Licensee and the Licensee shall have the right to produce the products under the same terms as stipulated in this Agreement.

Article VI

Royalties

One of the most critical and complex issues to be negotiated between the prospective licensor and the potential licensee is the price of the industrial property rights to be acquired. Direct monetary compensation for industrial property or for technology may take different forms: (a) lump-sum payment - a pre-calculated amount to be paid once or in instalments; (b) royalties - post-calculated, recurring payments, the amount of which is determined as a function of economic use or result (sales of the product); (c) fees - compensation for services and assistance rendered by technical or professional experts, fixed at a specified amount or calculated per person and per period of service.

Royalties linked to sales are paid only when the product is actually sold. This type of linkage ordinarily makes no distinction between sales with profit and sales without profit, so that, when determining the amount of the royalties, full consideration is required to make sure that a wholesome balance of profit is left to the licensee after payment of royalties.

Where royalties are linked to sales, the criterion of roayalty calculation is important. That criterion may be either the gross selling price or the net selling price.

The net selling price is used in the calculation of royalties to eliminate disadvantages to the licensee if the sales price includes items unrelated to the technology, or items which, although so related, are to be supplied by the licensor for which a profit will already have been gained at the expense of the licensee. The net selling price therefore consists of the sales price minus the cost of certain items. Which items should figure in this substraction from the sales price depends upon the character of the product, the sales practices for the product and the impact of the laws in certain countries governing the transfer of technology.

Where royalties are to be paid, a method of reporting the volume of production, sales or profits and the amount of the royalties determined thereon is provided for in the agreement. The period of such production, sales or profits is defined and the times in relation to that period, when the royalties calculated are to be paid, is stated.

6.1 Computation of the Royalty

Text A: The Licensee shall pay to the Licensor a royalty of ...% on the net sales of the licensed products. Further, the Licensee shall pay the same royalty of ...% on the net sales of any new products as mentioned in Article 5.4 for a period of ..... years from the start of commercial production of these new products.

Text B: The Licensee shall pay to the Licensor as compensation for continuous access to information and services given in areas such as manufacturing technology, process know-how, trouble-shooting and application know-how a royalty as follows: ...% on the net sales income of per year sales of the licensed products, for a period of ..... years commencing with the first year of which the annual audited accounts of the Licensee show a net profit before taxation and dividends. The above royalties shall be paid out of the profit of the Licensee, and before any dividends are being paid. The royalties shall be paid by the Licensee in full to the Licensor for a total of ..... years.

6.2 Sales Summary

The Licensee shall provide the Licensor with a written report certified by the Licensee's auditor on or before the 1st day of the month following the end of each license year period during the time that this Agreement is in effect, showing the total sales of the licensed products during the preceding licence year period.

6.3 Payment to Accompany Sales Summary

Payment of the royalties called for in this Article shall accompany the sales summary required by Article 6.2. In the event that no royalties are payable for any licence year period, the Licensee shall provide a written statement, notifying the Licensor to this effect.

6.4 Royalties Payable in Short License Year

In the event that this Agreement is terminated before the end of the license year, royalties shall be payable for all licensed products sold by the Licensee prior to the date of termination.

6.5 Currency, and Methods of Payment

The amount of payment due under this Agreement shall be converted to .....(currency of the Licensor's country) according to the rate of exchange at the last day of the license year period and is placed at the Licensor's disposal within 14 days thereafter in a bank nominated by the Licensor.

Article VII

Provision is usually also made in the agreement for the licensee to keep records and for the licensor to be given an opportunity to review the records so that the accuracy of royalties calculated by the licensee can be assessed.

7.1 Maintenance of Records and Inspection of Books

The Licensee shall keep true and complete records of all data necessary for the computation and verification of royalties pursuant to the terms of this Agreement, such as invoices for raw materials, purchases, production records and sales invoices of licensed products. Such records shall be maintained for a period of at least ..... years after the period to which they relate. Such records shall be available during ordinary business hours for inspection by the Licensor or its representatives.

Article VIII

8.1 Warranty

The Licensor warrants that the technical information to be transmitted hereunder to the Licensee is based on technology developed by the Licensor on corresponding grades which has been successfully employed by the Licensor in plants owned by the Licensor. The Licensor further warrants that it shall endeavour to transmit said technical information to the Licensee in the best manner and as accurately as is reasonably possible.

Article IX

9.1 Waiver of Breach

Waiver by either party of any breach of any provision, promise covenant or condition of this Agreement, or the failure of either party to require strict performance of any provisions, promise covenant or condition of this Agreement shall not constitute a waiver of any additional breach of any provisions, promise, covenant or condition of this Agreement.

Article X

Terms of Agreement and Termination

The duration of an agreement may come to an end at the normal expiration of the stated period of the agreement or prior to that time as the result of the exercise of a power of termination.

In the event of the expiration or the termination, questions may arise concerning the effect of such expiration or termination on the continuation of certain performances included the payment of royalties, the use of the technology, the manufacture and sale.

10.1 Notice necessary to terminate Agreement

Unless otherwise terminated as provided herein, this Agreement shall remain in effect for ..... license years from its date. The Agreement may be terminated by either party giving written notice of the intention to terminate at least one year before the end of the initial .... year license period, or, in the event that this Agreement runs for more than ..... license years, at least one year before the next anniversary of the end of another license period.

In the event that this Agreement is not terminated as provided herein within the ..... year license period, it will automatically be renewed on a ..... year basis.

This Agreement may be terminated by the Licensor as provided for in Article 10.2 or by the Licensee as provided for in Article 10.3.

10.2 Termination by the Licensor

The Licensor shall have the option to terminate this Agreement if:

1. the Licensee defaults under any terms or conditions of this Agreement, and fails to remedy the default within ... days after written notice of the existence of the default by the Licensor;

2. the Licensee becomes insolvent or enters receivership or bankruptcy, or is unable to continue its operations under the exclusive control of its management, or enters into a merger with, or is purchased by, another business concern, termination in such instances to be on ... days' written notice from the Licensor.

10.3 Termination by the Licensee

The Licensee shall have the option to terminate this Agreement if the Licensor defaults under any term or condition of this Agreement and fails to remedy the default within ... days after written notice of the existence of the default by the Licensee.

10.4 Right of Manufacture upon Termination

In the event that this Agreement should be terminated pursuant to Article 10.2, the right of the Licensee to manufacture the licensed products shall be revoked.

In the event of termination pursuant to Article 10.3 or 10.1 the Licensee shall have a free non-exclusive license to manufacture, use and sell the licensed products in the territory designated in Article 1.1.

Article XI

The fixing of the date of signature and entry into force can be of importance, particularly under the laws in certain countries governing the transfer of technology which require that the agreement be submitted for approval within a certain time after its conclusion. Because of the requirement of government approval the parties may wish to define the entry into force of the agreement in relation to the date of that approval.

11.1 Effective Date of Agreement

Text A: This Agreement will be effective from the date of this Agreement.

Text B: This Agreement will be effective from the date this Agreement has been signed by both parties.

The date of signature shall be put next to each relevant signatory. Should such signatures not be effected on the same date, the date of the last signature will give the effective date of Agreement.

Article XII

12.1 Taxation

Text A: The Licensee agrees to pay promptly and to hold the Licensor harmless for any and all taxes imposed upon the Licensor by Government entities in the Licensee's country which may be levied on the Licensor by virtue of the activities engaged under this Agreement.

In furtherance of the payment of these taxes, the Licensee shall prepare and file on behalf of the Licensor all returns and other documents and do all things necessary to comply with the laws of the Licensee's country.

Text B: Any taxes levied in the Licensee's country on payment due to the Licensor according to this Agreement, shall be payable by the Licensor. This implies that the Licensor holds the Licensee harmless for any taxes imposed on the Licensor by Government entities in the Licensee's country and which may be levied on representatives of the Licensor performing technical assistance under this Agreement. In furtherance of the payment of any of these taxes, the Licensee shall prepare and file on behalf of the Licensor all returns and other documents and do all things necessary to comply with the laws of the Licensee's country.

12.2 Assignment of Interests

The rights granted by the Licensor to the Licensee under this Agreement are personal in character. The Licensee may not, without prior consent in writing by the Licensor, assign its rights herein, or grant any sub-license thereof to a third party.

12.3 Relation of Parties to each other

This Agreement is not intended, nor should anything herein be construed, to create the relationship of principal and agent, employer and employee or co-partnership.

The problem of determining which law is applicable to a transaction involving the licensing of industrial property is complicated by the fact that on the international level such a transaction has multiple facets with contacts in more than one country. When deciding on governing law attention have to be paid to the laws in certain countries pursuant to which an industrial property license or technology transfer agreement will not be approved by the government authorities of the country if it contains a clause declaring that a legal system other than that of the country is to govern the interpretation of performance of the agreement.

The arbitration is entered in the event when amicable discussions or reference to an independent expert fail to resolve differences. The arbitration clause of the agreement should state the competent arbitration tribunal. There are several arbitration tribunals which could be referred to. The parties may prefer to prescribe in the arbitration clause the arbitration to be followed or to adopt the rules on ad-hoc arbitration of the United Nations Commission on International Trade Law (UNCITRAL)*/.

12.4 Governing Law and Arbitration

Text A: All disputes and questions whatsoever which shall arise between the parties hereto touching these presents or the construction or application thereof or any clause or thing herein contained and the rights, duties or liabilities of either party hereunder shall be referred to a single arbitrator in case the parties agree upon one otherwise to two arbitrators one to be appointed by each party to the difference and in either case in accordance with the subject to the Arbitration Ordinance in the Licensee's country or any statutory modification thereof from the time-being in force.

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*/ UNCITRAL Arbitration Rules - United Nations document A/31/17 (1976), pages 35 to 55

Text B: All disputes and differences which may arise out of this Agreement or in connection with it shall be settled by the parties in an amicable way. If an amicable settlement cannot be reached within ... months (or whatever period seems appropriate) the parties shall submit the disputes or differences to a single arbitrator to be agreed upon between the parties, or failing agreement to two arbitrators one to be appointed by each party and in default of agreement between the arbitrators an umpire to be appointed by the arbitrators before entering on the reference. Any such arbitration shall be conducted in accordance with and subject to the provisions of the Licensee's country Arbitration Act, or any statutory modification or re-enactment thereof for the time being in force.

If the claimant in the arbitration be the Licensor the venue of arbitration shall be in Licensee's country, and if the claimant shall be the Licensee the venue shall be in the Licensor's country.

12.5 Foreign exchange requirements

The Licensee shall, at its sole expense, undertake to comply with the law in his country affecting foreign investment and exchange. If Government approval is necessary in order to transfer royalty payments to Licensor's country, the Licensee will undertake to obtain the same at its own expense.

In addition the Licensee shall, at its own expense, undertake to comply with all requirements of the law in the Licensee's country affecting the validity of this Agreement.

12.6 Future Laws and Regulations

Should any laws or any regulations applicable to this Agreement invalidate any part of this Agreement the parties shall agree to such changes as will be required to achieve the same results for each party as before the new law or regulations. If this is not possible the parties shall agree to changes to the Agreement such that the possible adverse effects are carried equally by the parties.

12.7 Modifications

This Agreement constitutes the entire Agreement between the parties hereto relating to the subject matter hereof. No variations or modifications of this Agreement, nor waiver of any of the terms of provisions hereof, shall be deemed valid unless in writing, signed by both parties.

During the time in which the agreement is in force events may occur which partly or fully interfere with performance of some obligations stated by the Agreement. The interpretation of these events (Force-majeure) may significantly differ and therefore the parties may wish to define, describe or list the conditions or events which entitle one party to claim it is relieved of a given obligations. Unless the parties have defined these events, the party affected will have to rely on the decision of courts whether occurrence of a given event permits to suspend or delay party's performances without being required to pay compensation for non-performance.

12.8. Force-majeure

Any events and circumstances which the parties are unable to prevent - for instance, war, strike and lockouts as well as the refusal to grant or the revocation of approvals required from competent authorities - shall release the parties from the obligations under this Agreement so far as and so long as they inhibit fulfillment of this Agreement, plus an adequate period of time for reorganizing the work.

The parties will immediately notify each other of such circumstances in order that the necessary steps can be taken to avoid any damages that might be caused.

12.9 Notice

All notices required by the terms of this Agreement shall be sent by certified mail to the addresses given in the introduction to this Agreement, unless notice of a change of the same is given in writing in accordance with this Article, in which case notice shall be sent to the new address.

Notices are considered valid as from the date received by the party to whom it is addressed.

In witness whereof the parties have caused this Agreement to be signed on the day and year first above written.

Signed by:
for and on behalf of
THE LICENSOR

Date:_____

Signed by:
for and on behalf of
THE LICENSEE

Date:_____

2 Illustrative Text of Technical Information Agreement

This Agreement made _____(Day, month and year)

between

The Licensor _____(Legal name of Licensor)
having registered office _____ (place)
(hereinafter called "Licensor") of the one part

and

The Licensee _____ (Legal name of Licensee)
having registered office _____ (place)
(hereinafter called "Licensee") of the other part.

1.1 Technical Information

The Licensor undertakes to make available to the Licensee all technical information described in Exhibit "A" (see page 32), attached hereto and supplemented as provided in said exhibit.

2. Transmission of Technical Information

Technical information may be transmitted orally, in writing or by practical demonstration as the occasion requires and shall be sufficient in scope to enable competent engineering and manufacturing personnel to understand, apply and evaluate the subject matter. The technical information where written or oral, shall be in the (English) language. The transmission may take any reasonable form the Licensor deems suitable under the circumstances.

3. Payments

In consideration of the information to be furnished by the Licensor to the Licensee hereunder, the Licensee hereby agrees to pay to the Licensor an amount of ..... of which one half shall be paid upon transmission to the Licensee's country of the complete initial process, information as described in Exhibit "A" attached hereto and one half ..... days after the starting up of the commercial operation of the plant.

4. Warranty

The Licensor represents that the technical information to be transmitted hereunder to the Licensee is based on the latest technology developed by the Licensor or corresponding processes which have been successfully employed by the Licensor in plants owned by the Licensor. The Licensor warrants it shall endeavour to transmit said technical information to the Licensee in the best manner and as accurately as is reasonably possible and in sufficient detail to permit the Licensee to construct and operate a modern and efficient plant similar to the Licensor's plants at ..... with an annual capacity of approximately ..... metric tons of ..... and ..... metric tons of ..... The quality of the products shall be comparable to that of the products manufactured at the said plants in .....

Within a period of ..... months from the completion of the installations of the plant a test period of not less than ..... hours shall be conducted, under which period the plant shall operate under full capacity. If this test period has not been successfully completed within the said .....months period, the Licensor shall be responsible for the cost of further testing, limited upwards to .....

5. Confidential Information

The Licensee agrees that any and all technical information given by the Licensor to the Licensee pursuant to this Agreement shall be retained in strict confidence by the Licensee and shall not be disclosed to any other firm, persons, corporation, except after receipt by the Licensee of the Licensor's written consent to such disclosure, and except that disclosure, without the Licensor's prior written consent, shall be permitted to such of the persons employed whether by the Licensee or by any contractor for the Licensee to design, engineer, construct or operate the Licensee's own facilities as may be necessary for the proper discharge of their duties, provided such persons have previously given a written undertaking, in a form satisfactory to the Licensor, not to disclose such technical information to any other person or firm, to utilize it for any other purpose, or other arrangements satisfactory to the Licensor have been made to retain the confidential character of the technical information.

6. Taxes

The Licensee shall pay all ..... taxes of whatever nature, registration fees, bank charges, duties or other charges that are assessed upon this Agreement or with respect to any payment hereunder.

7. Applicable law and arbitration

All disputes and question whatsoever which shall arise between the parties hereto touching these presents or the construction or application thereof or any clause or thing herein contained and the rights, duties or liabilities of either party hereunder shall be referred to a single arbitrator in case the parties agree upon one otherwise to two arbitrators one to be appointed by each party to the difference and in either case in accordance with and subject to the Arbitration Ordinance in the Licensee's country or any statutory modification thereof for the time-being in force.

8. Force Majeure

In the event of any failure or delay in performance by either party arising from a cause beyond its control, such failure or delay shall not be deemed a breach of this Agreement, such cases including without being limited to force majeure acts of the public enemy, wars, riots, insurrections, hostilities, laws, rules, regulations or acts of Governments, Government Agencies or instrumentalists, unavailability or shortage of carriage or failure or delay of either party's suppliers for any reason. The time for either party's performance shall be extended for the period that the cause continues to operate.

EXHIBIT "A"

The Technical Information shall include sufficient information as generally characterized below which, in the opinion of the Licensor, shall enable the Licensee to construct and operate a modern and efficient Petrochemical plant for the manufacture of.....

1. General Information

   1.1 Site conditions
   1.2 Process requirements
       Utilities
       Effluents
       Raw materials
   1.3 Product specification
   1.4 Raw materials specification

2. Process Design

   2.1 Process flow diagram
   2.2 Material and heat balances
   2.3 Process flowsheets

3. Engineering

   3.1 Equipment data
   3.2 Instrumentation specifications

4. Plant operating manuals

5. Analytical procedures